

NOTICE OF FINAL RULEMAKING
TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 9. DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER POLLUTION CONTROL

PREAMBLE

1. Article, Part of Sections Affected (as applicable) Rulemaking Action

R18-9-1002	Amend
R18-9-1015	Amend

2. Citations to the agency's statutory rulemaking authority to include the authorizing statute (general) and the implementing statute (specific):

Authorizing statute: A.R.S. §§ 49-203, 49-255.01(B), and 49-255.03(A)

Implementing statutes: A.R.S. §§49-255.01 and 49-255.03

3. The effective date of the rule:

4. Citations to all related notices published in the Register as specified in R1-1-409(A) that pertain to the record of the proposed rule:

Notice of Rulemaking Docket Opening: 20 A.A.R. 135 (January 17, 2014)

Notice of Proposed Rulemaking: 20 A.A.R. 2838 (October 24, 2014)

5. The agency's contact person who can answer question about the rulemaking:

Name: Wendy LeStarge

Address: Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, Arizona 85007

Telephone: (602) 771-4836 (Toll-free number in Arizona: (800) 234-5677)

Fax: (602) 771-4834

E-mail: lestage.wendy@azdeq.gov

6. An agency's justification and reason why a rule should be made, amended, repealed or

renumbered, to include an explanation about the rulemaking:

The Arizona Department of Environmental Quality (ADEQ) is proposing to repeal the prohibition on incineration of biosolids, thereby allowing incineration as a means of disposal of biosolids.

What are biosolids?

Domestic sewage is the waste or wastewater from humans or household operations that is discharged to or otherwise enters a wastewater treatment plant. 40 C.F.R. § 503.9. Through treatment at a wastewater treatment plant, sewage sludge (the solid, semisolid or liquid residue byproduct) is generated. Biosolids are that part of sewage sludge that is used beneficially, usually as a soil amendment for agricultural purposes. Federal law uses the term sewage sludge, but the U.S. Environmental Protection Agency (EPA) uses the terms sewage sludge and biosolids interchangeably in guidance documents. Biosolids are defined in A.A.C. R18-9-1001, as a subset of sewage sludge that is beneficially applied as a soil amendment for agricultural purposes. Biosolids have been used beneficially in Arizona by adding to nutrient-poor soil to increase plant production.

Section 405 of the Clean Water Act (33 U.S.C. 1345) regulates the disposal of sewage sludge in order to prevent it from entering waters of the U.S. For biosolids that are not used beneficially as a soil amendment for agricultural purposes, other disposal means include landfills or incineration. Arizona has regulated aspects of biosolids since 1979. ADEQ's Biosolids/Sewage Sludge Management Program implements Section 405 of the Clean Water Act, A.R.S. § 49-255.03, and 18 A.A.C. 9, Article 10. ADEQ's biosolids rules require that any person applying or transporting biosolids/sewage sludge in Arizona must register that activity. The rules are self-implementing by the person who transports, applies biosolids to land, or places biosolids on a surface disposal site.

Why is ADEQ proposing this change?

ADEQ was delegated the Biosolids/Sewage Sludge Management Program in March 31, 2004 by the EPA. As a federally-delegated program, ADEQ's laws, rules, and program must comply with EPA requirements. Arizona has prohibited incineration of biosolids under R18-9-1002(G) since 2001.

Within the past two years, ADEQ has received inquiries regarding the prohibition on incineration of biosolids, from such groups as the AZ Water Association, who are interested in alternative energy generation. Emerging trends for "best-practices" for the management of biosolids advocate energy neutrality at wastewater treatment plants. With rapidly evolving processes and technologies, such as pyrolysis, gasification and incineration, owners of wastewater treatment plants see that the goal of

achieving energy recovery (thermal and electrical energy) from biosolids can be done in a technically sound, environmentally compatible, and cost effective manner.

EPA's rules on biosolids are in 40 CFR, Part 503 and include Subpart E on Incineration. With the repeal on the prohibition of incineration, ADEQ proposes to incorporate by reference Subpart E of the federal rules in order to properly regulate biosolids incinerators. Subpart E rules include monitoring the exit gas from the incinerator and ensuring that National Emission Standards for air quality for specified pollutants, such as beryllium or lead are not exceeded. The Subpart E rules are based on the Clean Water Act, even though they rely on National Emission Standards in 40 CFR Part 61, promulgated under the Clean Air Act.

Clean Air Act regulation

An owner of a biosolids incinerator will need to comply with both Clean Water Act and Clean Air Act requirements, but the Clean Air Act rules are much more comprehensive with respect to air quality concerns. An owner of any future biosolids incinerator will need to obtain a Clean Air Act Permit from ADEQ's Air Quality Division before beginning construction. ADEQ's Air Quality Division will evaluate the proposed facility at that time, determine which applicable federal and state laws apply, and determine any applicable control technology. The Clean Air Act also provides for public participation as part of the permitting process.

Three Arizona counties (Maricopa, Pima, and Pinal) have their own air pollution control agencies and have jurisdiction over stationary sources of air pollutants within their counties (except for refineries, copper smelters, coal-fired power plants, and Portland cement plants). These three counties would be responsible for any Clean Air Act permitting or inspections of new biosolids incinerators located within their respective jurisdictions.

7. A reference to any study relevant to the rule that the agency reviewed and proposes either to rely on or not to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

Not applicable

8. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

9. A summary of the economic, small business, and consumer impact:

A. Brief summary of the information included in the economic, small business and consumer impact statement:

Any costs related to this rule change should be minimal. The requirements in 40 CFR 503 Subpart E are self-implementing for the entity that seeks to incinerate biosolids. This proposed rule is eliminating a prohibition and therefore allows a generator of biosolids (wastewater treatment plant) the additional option to incinerate biosolids, which did not exist before.

B. Name and address of agency employees who may be contacted to submit or request additional data on the information included in the economic, small business and consumer impact statement:

Name: Wendy LeStarge
Address: Arizona Department of Environmental Quality
1110 W. Washington Street (MC 5415B-2)
Phoenix, Arizona 85007
Telephone: (602) 771-4836 (Toll-free number in Arizona: (800) 234-5677)
Fax: (602) 771-4834
E-mail: lestarge.wendy@azdeq.gov

C. Identification of persons who will be directly affected by, bear the costs of or directly benefit from the rulemaking:

Entities that would be directly affected by this rulemaking would be ADEQ, political subdivisions (as regulators or owners of wastewater treatment plants), biosolids generators (wastewater treatment plants) and biosolids land applicators. No biosolids incinerators currently exist in Arizona.

D. Cost-benefit analysis of probable costs and benefits to ADEQ and other agencies:

The only state agency that should be affected by this rulemaking should be ADEQ. The Biosolids/Sewage Sludge Management Program is under ADEQ's Water Quality Division. As requirements in 40 CFR 503 Subpart E are self-implementing for the entity that seeks to incinerate biosolids, the Water Quality Division would incur minor additional workload in reviewing reports. ADEQ will need to update its delegation agreement with EPA to reflect the new regulations allowing disposal of biosolids through incineration.

ADEQ's Air Quality Division already has authority to issue any permits required under the Clean Air Act. The Air Quality Division may incur costs for permitting and inspecting a future biosolids incinerator, plus staff may need to expend time to become familiar with any particularities of biosolids incinerators. The Air Quality Division should be able to recover its permitting costs through fees. Both divisions may expend time in coordinating with each other regarding reporting requirements.

E. Cost-benefit analysis of probable costs and benefits to political subdivisions:

This rulemaking could impact a political subdivision that owns a wastewater treatment plant or regulates air quality. A political subdivision that owns a wastewater treatment plant, or is planning a new or expanded one, will have another option to dispose of its biosolids. Any generator of biosolids that chooses to exercise the option to incinerate biosolids would incur some minor costs for monitoring, reporting and recordkeeping under the Subpart E regulations required by the Clean Water Act. Unrelated to this rulemaking, a generator of biosolids also would incur costs such as the capital investment of an incinerator, permitting costs for air quality permits, and any necessary emissions control technology required to meet the existing Clean Air Act requirements.

A political subdivision that regulates air quality or regulates incinerators through zoning restrictions should not incur any additional costs. ADEQ has prohibited incineration of biosolids under the Clean Water Act. Lifting this prohibition does not change a political subdivision's authority to regulate incinerators under other laws such as through zoning or the Clean Air Act. Maricopa, Pima, and Pinal counties, the three Arizona counties with their own air pollution control agencies, could face costs related to any permitting or inspections of new biosolids incinerators located within their respective jurisdictions, but should be able to recover their costs through fees.

F. Cost-benefit analysis of probable costs and benefits to businesses:

A generator of biosolids/wastewater treatment plant, or a business that is planning a new or expanded one, will have another option to dispose of its biosolids. Any generator of biosolids that chooses to exercise the option to incinerate biosolids would incur some minor costs for monitoring, reporting and recordkeeping under the Subpart E regulations required by the Clean Water Act. Unrelated to this rulemaking, a generator of biosolids also would incur costs such as the capital investment of an incinerator, permitting costs for air quality permits, and any necessary emissions control technology required to meet the existing Clean Air Act requirements.

Businesses of incinerator technology would likely benefit through this rulemaking by selling incinerator technology to biosolids generators.

This rulemaking does not impose costs or benefits on the current status quo of generators of biosolids or land applicators of biosolids. By eliminating the prohibition on incineration, generators of biosolids will have another option to dispose of biosolids. Any generator of biosolids, or a business that is planning a new or expanded wastewater treatment plant, that chooses to construct and operate an incinerator will face some costs in complying with Subpart E air emissions as required under the Clean Water Act.

Providing an additional disposal option, which can include increased options of energy recovery through incineration, could make biosolids more valuable to the generators of biosolids, and consequently negatively impact land applicators of biosolids. Usually the generators of biosolids pay the land applicators to manage the biosolids through land application. Land applicators of biosolids may face increased costs (or reduced revenues) because the supply of biosolids for agricultural purposes may be reduced.

G. Probable impact on public and private employment:

ADEQ does not anticipate that private or public employment will be directly affected by these rules.

H. Probable impact on small businesses:

ADEQ does not anticipate that this rulemaking will impact a small business wastewater treatment facility. This rulemaking removes a prohibition and therefore allows the option to incinerate biosolids as a means of disposal. Any generator of biosolids that chooses to exercise the option to incinerate biosolids would incur costs unrelated to this rulemaking. Such costs would include the capital investment of an incinerator, permitting costs for air quality permits, and any necessary emissions control technology required to meet the existing Clean Air Act requirements. In discussions with groups such as the AZ Water Association, the most likely candidate to incinerate biosolids is a large wastewater treatment plant, since it will need a set amount of biosolids supply onsite in order to function and achieve economies of scale.

1) The administrative and other costs required for compliance with the proposed rule making.

This rulemaking removes an existing prohibition and allows an additional option to dispose of

biosolids. There maybe some additional minor costs related to reporting requirements under the incorporated by reference Subpart E on Incineration.

2) A description of the methods prescribed in section 41-1035 that the agency may use to reduce the impact on small businesses, with reasons for the agency's decision to use or not to use each method.

(i) Establish less costly schedules or less stringent deadlines for compliance, or consolidate or simplify the rule's compliance or reporting requirements in the proposed rule making.

ADEQ anticipates that any reporting under the Clean Water Act requirements would be minor for any entity that chooses to incinerate biosolids as a means of disposal.

(ii) Establish less costly compliance requirements, including establishing performance standards to replace design or operational standards in the proposed rule making.

The federal rules to be incorporated by reference establish pollutant limits for pollutants such as lead, arsenic, cadmium, chromium, and nickel, and operational standards for total hydrocarbons concentration in exit gas. As a federally-delegated program, ADEQ's laws, rules, and program must comply with EPA requirements.

(iii) Exempt small businesses from any or all requirements of the proposed rule making.

As a federally-delegated program, ADEQ's laws, rules, and program must comply with EPA requirements.

3) The probable cost and benefit to private persons and consumers who are directly affected by the proposed rule making.

ADEQ does not anticipate that private persons or consumers would be directly affected by removing the prohibition on incineration of biosolids. Any potential health-related impacts would be addressed in requisite Clean Air Act permits.

I. Probable effect on state revenues:

There is no direct effect on state revenues in lifting the prohibitions on incineration of biosolids.

Indirectly, ADEQ would assess permit fees for any entity seeking a Clean Air Act permit to incinerate biosolids.

J. Description of less intrusive or less costly alternative methods of achieving the proposed rulemaking:

ADEQ is implementing a less intrusive method by removing an existing prohibition and allowing facilities the option to incinerate biosolids as a means of disposal

K. Explanation of the limitations of the data available for this economic small business and consumer impact statement.

As there are no biosolids incinerators in Arizona, ADEQ does not have or collect data related to incinerators of biosolids. Much of the data reported to ADEQ is from land applicators of biosolids, which will still continue.

10. A description of any changes between the proposed rulemaking, to include supplemental notices, and the final rulemaking:

None.

11. An agency's summary of the public or stakeholder comments made about the rulemaking and the agency response to the comments:

ADEQ received one comment in favor of the proposed rulemaking. In anticipation of this rulemaking, ADEQ met with stakeholder wastewater treatment plants and consultants for wastewater treatment plants to discuss the proposed changes and the scope of this rulemaking, all of whom supported the proposed rulemaking.

12. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

There are no matters prescribed by statute applicable to the agency or to any specific rule or class or rules.

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

Lifting the prohibition on incineration of biosolids does not require a permit. ADEQ regulates wastewater treatment plants that prepare biosolids for land application under an Arizona Pollutant Discharge Elimination System (AZPDES) individual or general permit, which contain provisions for the treatment of biosolids.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

The rule is no more stringent than federal law as ADEQ is incorporating by reference the federal rules for incineration of biosolids.

c. Whether a person submitted an analysis to the agency that compares the rule's impact of

the competitiveness of business in this state to the impact on business in other states:

No person has submitted an analysis to the agency that compares the rule's impact on the competitiveness of business in this state to the impact on business in other states.

13. List of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:

R18-9-1002(G) 40 CFR Part 503, Subpart E, July 1, 2013 edition

14. Whether the rule was previously made, amended or repealed as an emergency rule, If so, cite the notice published in the *Register* as specified in R1-1-409(A). Also, the agency shall state where the text was changed between the emergency and the final rulemaking packages:

Not applicable

15. The full text of the rule follows:

TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 9. DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER POLLUTION CONTROL

**ARTICLE 10. ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM – DISPOSAL,
USE, AND TRANSPORTATION OF BIOSOLIDS**

Section

R18-9-1002. Applicability and Prohibitions

R18-9-1015. Inspection

**ARTICLE 10. ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM - DISPOSAL,
USE, AND TRANSPORTATION OF BIOSOLIDS**

R18-9-1002. Applicability and Prohibitions

A. This Article applies to:

1. Any person who:
 - a. Prepares biosolids for land application or disposal in a sewage sludge unit or in an incinerator,
 - b. Transports biosolids for land application or incineration, or disposal in a sewage sludge unit,
 - c. Applies biosolids to the land,
 - d. Owns or operates a sewage sludge unit, ~~or~~
 - e. Owns or leases land to which biosolids are applied, or
 - f. Owns or operates an incinerator that fires sewage sludge,
2. Biosolids applied to the land or placed on a surface disposal site,
3. Land where biosolids are applied, and
4. A surface disposal site.

B. The land application of biosolids in a manner consistent with this Article is exempt from the requirements of the aquifer protection program established under A.R.S. Title 49, Chapter 2, Article 3 and 18 A.A.C. 9, Articles 1, 2, and 3.

C. Except as provided in subsection (D), the land application of biosolids in a manner that is not consistent with Articles 9 and 10 of this Chapter is prohibited.

D. The Department may permit the land application of biosolids in a manner that differs from the requirements in R18-9-1007 and R18-9-1008 if the land application is permitted under the aquifer protection permit program established under A.R.S. Title 49, Chapter 2, Article 3, and 18 A.A.C. 9, Articles 1, 2, and 3.

E. Surface disposal site.

1. Any person who prepares biosolids that are placed in a sewage sludge unit, or places biosolids in a sewage sludge unit, or who owns or operates a biosolids surface disposal site shall comply with 40 CFR 503, Subpart C, which is incorporated by reference in R18-9-A905(A)(9), and
 - a. The pathogen reduction requirements in R18-9-1006, and
 - b. The vector attraction reduction requirements in R18-9-1010.
2. In addition to the requirements under subsection (E)(1), any person who owns or operates a biosolids surface disposal site shall apply for, and obtain, a permit under 18 A.A.C. 9, Articles 1 and 2.

- F. A person shall not apply bulk biosolids to the land or place bulk biosolids in a surface disposal site or fire sewage sludge in a sewage sludge incinerator if the biosolids are likely to adversely affect a threatened or endangered species as listed under section 4 of the Endangered Species Act (16 U.S.C. 1533), or its designated critical habitat as defined in 16 U.S.C. 1532.
- G. ~~The incineration of~~ A person incinerating biosolids ~~is prohibited~~ shall comply with the requirements set out in 40 CFR Part 503, Subpart E, July 1, 2013 edition, which is incorporated by reference and does not include any later amendments or editions of the incorporated material. Copies of the incorporated material are available for inspection at the Arizona Department of Environmental Quality, 1110 West Washington Street, Phoenix, Arizona 85007 or may be obtained from the U.S. General Printing office at
<http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR>.

R18-9-1015. Inspection

A person subject to this Article shall allow, during reasonable times, a representative of the Department to enter property subject to this Article, to:

1. Inspect all biosolids pathogen and vector treatment facilities, transportation vehicles, incinerators that fire sewage sludge, and land application sites to determine compliance with this Article;
2. Inspect and copy records prepared in accordance with this Article; and
3. Sample biosolids quality.